# GOVERNMENT OF INDIA
# WATER RESOURCES, RIVER DEVELOPMENT AND GANAGA REJUVENATION
# LOK SABHA

UNSTARRED QUESTION NO:5349
ANSWERED ON:06.04.2017
Losses due to Floods and Rains
Bohara Shri Ramcharan

**Will the Minister of WATER RESOURCES, RIVER DEVELOPMENT AND GANAGA REJUVENATION be pleased to state:**

(a) whether the Government has made any assessment of losses caused due to regular floods and rains every year in the country and if so, the details thereof;

(b) whether the Government has estimated the quantum of rainwater wasted every year in the country and if so, the details thereof;

(c) whether the Government proposes to channelise this water to the areas facing shortage of water to prevent the losses occurring due to floods and to check the wastage of precious water; and

(d) if so, the details thereof and the steps taken/being taken by the Government in this regard?

## Answer

THE MINISTER OF STATE FOR WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION

(DR. SANJEEV KUMAR BALYAN)

(a) Yes, Madam. Central Water Commission (CWC) compiles the flood damage data every year reported by the States/ UTs in the predefined proforma. The all India average flood damage data since 1953 as reported by the State Governments is at Annex-I.
(b),(c) & (d) As per the assessment done by CWC in the year 1993, the river basin-wise average annual water availability in the country is 1869 billion cubic meters (BCM). It is estimated that owing to topographic, hydrological and other constraints, the utilizable water with conventional approach is 1123 BCM which comprises of 690 BCM of surface water and 433 BCM of replenishable ground water resources. Further, it has been estimated in the year 2009 by CWC that about 450 BCM of surface water is being utilized for various purposes. Also, as per the July 2014 report of CGWB titled ground water draft for irrigation, domestic and industrial uses is 245 BCM. Thus, the quantity of water flowing down to the sea can be approximately considered as 1174 BCM.
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Water being a State subject, steps for augmentation, conservation and efficient management to ensure sustainability of water resources are undertaken by the respective State Governments. With a view to meet the growing demand for water, various measures are taken by the respective State Governments for bringing the available water resources within the category of utilizable resources to the maximum possible extent which include creation of storages, restoration of water bodies, rainwater harvesting, artificial recharge of ground water, adoption of better management practices etc. State Governments conceptualise, plan and implement major, medium and minor schemes (both surface and ground water) for utilization of water resources.

In order to supplement the efforts of the State Governments, Government of India provides technical and financial assistance to State Governments to encourage sustainable development and efficient management of water resources through various schemes and programmes namely "Accelerated Irrigation Benefits Programme (AIBP)" and "Repair, Renovation and Restoration of Water Bodies" (RRR). Pradhan Mantri Krishi Sinchai Yojna (PMKSY) has been formulated amalgamating on-going schemes viz. Accelerated Irrigation Benefit Programme (AIBP) of the Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWR, RD&GR), Integrated Watershed Management Programme (IWMP) of Department of Land Resources (DoLR) and the On-Farm Water Management (OFWM) of Department of Agriculture and Cooperation (DAC).

Under the National Perspective Plan (NPP) prepared by this Ministry for water resources development through Inter-basin transfer of water from surplus basin to deficit basins, National Water Development Agency(NWDA) has identified 30 links (16 under Peninsular Component and 14 under Himalayan component) for preparation of feasibility reports. The feasibility reports of 14 links under Peninsular Component and 2 links in Himalayan component have been prepared. The DPR in respect of 3 links have been completed.

The inter-basin transfer proposals would create additional irrigation potential, hydropower generation, apart from incidental benefits of flood moderation, navigation, drinking and industrial water supply, fisheries etc.
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Annex-I
ANNEXURE REFERRED TO IN REPLY TO PART (a) OF LOK SABHA UNSTARRED QUESTION NO.5349 FOR ANSWER ON 06.04.2017 REGARDING "LOSSES DUE TO FLOODS AND RAINS"
STATEMENT SHOWING DAMAGE DUE TO FLOODS / HEAVY RAINS DURING 1953 TO 2016

Sl. No. Year Area affected in mHa Polulation affected in million Damaged Area in mHa Values in Rs. crore Damage to Houses Cattle Lost (Nos) Human live Lost(Nos) Damage to Public Utilities in Rs. crore Total damages crops, houses & Public Utilities in Rs. crore Nos. Values in Rs. crore

(col.6+8+11)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1953 | 2.290 | 24.280 | 0.930 | 42.080 | 264924 | 7.420 | 47034 | 37 | 2.900 | 52.400 |
| 2 | 1954 | 7.490 | 12.920 | 2.610 | 40.520 | 199984 | 6.561 | 22552 | 279 | 10.150 | 57.231 |
| 3 | 1955 | 9.440 | 25.270 | 5.310 | 77.800 | 1666789 | 20.945 | 72010 | 865 | 3.980 | 102.725 |
| 4 | 1956 | 9.240 | 14.570 | 1.110 | 44.440 | 725776 | 8.047 | 16108 | 462 | 1.140 | 53.627 |
| 5 | 1957 | 4.860 | 6.760 | 0.450 | 14.120 | 318149 | 4.979 | 7433 | 352 | 4.270 | 23.369 |
| 6 | 1958 | 6.260 | 10.980 | 1.400 | 38.280 | 382251 | 3.896 | 18439 | 389 | 1.790 | 43.966 |
| 7 | 1959 | 5.770 | 14.520 | 1.540 | 56.760 | 648821 | 9.418 | 72691 | 619 | 20.020 | 86.198 |
| 8 | 1960 | 7.530 | 8.350 | 2.270 | 42.550 | 609884 | 14.309 | 13908 | 510 | 6.310 | 63.169 |
| 9 | 1961 | 6.560 | 9.260 | 1.970 | 24.040 | 533465 | 0.889 | 15916 | 1374 | 6.440 | 31.369 |
| 10 | 1962 | 6.120 | 15.460 | 3.390 | 83.180 | 513785 | 10.655 | 37633 | 348 | 1.050 | 94.885 |
| 11 | 1963 | 3.490 | 10.930 | 2.050 | 30.170 | 420554 | 3.701 | 4572 | 432 | 2.740 | 36.611 |
| 12 | 1964 | 4.900 | 13.780 | 2.490 | 56.870 | 255558 | 4.588 | 4956 | 690 | 5.149 | 66.607 |
| 13 | 1965 | 1.460 | 3.610 | 0.270 | 5.870 | 112957 | 0.195 | 7286 | 79 | 1.070 | 7.135 |
| 14 | 1966 | 4.740 | 14.400 | 2.160 | 80.150 | 217269 | 2.544 | 9071 | 180 | 5.736 | 88.430 |
| 15 | 1967 | 7.120 | 20.460 | 3.270 | 133.310 | 567995 | 14.264 | 5827 | 355 | 7.857 | 155.431 |
| 16 | 1968 | 7.150 | 21.170 | 2.620 | 144.610 | 682704 | 41.112 | 130305 | 3497 | 25.373 | 211.095 |
| 17 | 1969 | 6.200 | 33.220 | 2.910 | 281.900 | 1268660 | 54.423 | 270328 | 1408 | 68.112 | 404.435 |
| 18 | 1970 | 8.460 | 31.830 | 4.910 | 162.780 | 1434030 | 48.606 | 19198 | 1076 | 76.441 | 287.827 |
| 19 | 1971 | 13.250 | 59.740 | 6.240 | 423.130 | 2428031 | 80.241 | 12866 | 994 | 129.113 | 632.484 |
| 20 | 1972 | 4.100 | 26.690 | 2.450 | 98.560 | 897301 | 12.460 | 58231 | 544 | 47.174 | 158.194 |
| 21 | 1973 | 11.790 | 64.080 | 3.730 | 428.030 | 869797 | 52.482 | 261016 | 1349 | 88.489 | 569.001 |
| 22 | 1974 | 6.700 | 29.450 | 3.330 | 411.640 | 746709 | 72.434 | 16846 | 387 | 84.942 | 569.016 |
| 23 | 1975 | 6.170 | 31.360 | 3.850 | 271.490 | 803705 | 34.097 | 17345 | 686 | 166.050 | 471.637 |
| 24 | 1976 | 11.910 | 50.460 | 6.040 | 595.030 | 1745501 | 92.160 | 80062 | 1373 | 201.495 | 888.685 |
| 25 | 1977 | 11.460 | 49.430 | 6.840 | 720.610 | 1661625 | 152.290 | 556326 | 11316 | 328.948 | 1201.848 |
| 26 | 1978 | 17.500 | 70.450 | 9.960 | 911.090 | 3507542 | 167.574 | 239174 | 3396 | 376.100 | 1454.764 |
| 27 | 1979 | 3.990 | 19.520 | 2.170 | 169.970 | 1328712 | 210.606 | 618248 | 3637 | 233.627 | 614.203 |
| 28 | 1980 | 11.460 | 54.120 | 5.550 | 366.370 | 2533142 | 170.851 | 59173 | 1913 | 303.283 | 840.504 |
| 29 | 1981 | 6.120 | 32.490 | 3.270 | 524.560 | 912557 | 159.630 | 82248 | 1376 | 512.314 | 1196.504 |
| 30 | 1982 | 8.870 | 56.010 | 5.000 | 589.400 | 2397365 | 383.869 | 246750 | 1573 | 671.607 | 1644.876 |
| 31 | 1983 | 9.020 | 61.030 | 3.290 | 1285.850 | 2393722 | 332.327 | 153095 | 2378 | 873.429 | 2491.606 |
| 32 | 1984 | 10.710 | 54.550 | 5.190 | 906.090 | 1763603 | 181.308 | 141314 | 1661 | 818.164 | 1905.562 |
| 33 | 1985 | 8.380 | 59.590 | 4.650 | 1425.370 | 2449878 | 583.855 | 43008 | 1804 | 2050.043 | 4059.268 |
| 34 | 1986 | 8.810 | 55.500 | 4.580 | 1231.580 | 2049277 | 534.410 | 60450 | 1200 | 1982.535 | 3748.525 |
| 35 | 1987 | 8.890 | 48.340 | 4.940 | 1154.640 | 2919380 | 464.490 | 128638 | 1835 | 950.590 | 2569.720 |
| 36 | 1988 | 16.290 | 59.550 | 10.150 | 2510.900 | 2276533 | 741.600 | 150996 | 4252 | 1377.800 | 4630.300 |
| 37 | 1989 | 8.060 | 34.150 | 3.010 | 956.740 | 782340 | 149.820 | 75176 | 1718 | 1298.770 | 2405.330 |
| 38 | 1990 | 9.303 | 40.259 | 3.179 | 695.610 | 1019930 | 213.733 | 134154 | 1855 | 455.266 | 1708.920 |
| 39 | 1991 | 6.357 | 33.889 | 2.698 | 579.015 | 1134410 | 180.421 | 41090 | 1187 | 728.893 | 1488.329 |
| 40 | 1992 | 2.645 | 19.256 | 1.748 | 1027.578 | 687489 | 306.284 | 78669 | 1533 | 2010.670 | 3344.532 |
| 41 | 1993 | 11.439 | 30.409 | 3.206 | 1308.627 | 1926049 | 528.324 | 211193 | 2864 | 1445.534 | 3282.485 |
| 42 | 1994 | 4.805 | 27.548 | 3.963 | 888.622 | 914664 | 165.206 | 52315 | 2078 | 740.762 | 1794.590 |
| 43 | 1995 | 5.245 | 35.932 | 3.245 | 1714.787 | 2001898 | 1307.894 | 62438 | 1814 | 679.627 | 3702.308 |
| 44 | 1996 | 8.049 | 44.729 | 3.827 | 1124.491 | 726799 | 176.589 | 73208 | 1803 | 861.393 | 3005.743 |
| 45 | 1997 | 4.569 | 29.663 | 2.258 | 692.743 | 505128 | 152.504 | 27754 | 1402 | 1985.934 | 2831.181 |
| 46 | 1998 | 10.845 | 47.435 | 7.495 | 2594.167 | 1932874 | 1108.783 | 107098 | 2889 | 5157.771 | 8860.721 |
| 47 | 1999 | 7.765 | 27.993 | 1.753 | 1850.873 | 1613260 | 1299.057 | 91289 | 745 | 462.830 | 3612.760 |
| 48 | 2000 | 5.382 | 45.013 | 3.580 | 4246.622 | 2628855 | 680.943 | 123252 | 2606 | 3936.979 | 8864.544 |
| 49 | 2001 | 6.175 | 26.463 | 3.964 | 688.481 | 716187 | 816.474 | 32704 | 1444 | 5604.461 | 7109.416 |
| 50 | 2002 | 7.090 | 26.323 | 2.194 | 913.092 | 762492 | 599.368 | 21533 | 1001 | 1062.083 | 2574.543 |
| 51 | 2003 | 6.120 | 43.201 | 4.268 | 7307.230 | 775379 | 756.481 | 15161 | 2166 | 3262.154 | 11325.866 |
| 52 | 2004 | 5.314 | 43.725 | 2.888 | 778.694 | 1664388 | 879.601 | 134106 | 1813 | 1656.090 | 3314.385 |
| 53 | 2005 | 12.562 | 22.925 | 12.299 | 2370.923 | 715749 | 380.531 | 119674 | 1455 | 4688.219 | 7439.672 |
| 54 | 2006 | 1.096 | 25.224 | 1.822 | 2850.668 | 1497428 | 3636.848 | 266945 | 1431 | 13303.926 | 19790.922 |
| 55 | 2007 | 7.145 | 41.402 | 8.795 | 3121.532 | 3280233 | 2113.108 | 89337 | 3389 | 8049.037 | 13283.677 |
| 56 | 2008 | 3.427 | 29.910 | 3.186 | 3401.563 | 1566809 | 1141.891 | 101780 | 2876 | 5046.481 | 9589.935 |
| 57 | 2009 | 3.844 | 29.537 | 3.592 | 4232.609 | 1235628 | 10809.795 | 63383 | 1513 | 17509.353 | 32551.758 |
| 58 | 2010 | 2.624 | 18.297 | 4.994 | 5887.380 | 293830 | 875.952 | 39706 | 1582 | 12757.253 | 19520.586 |
| 59 | 2011 | 1.895 | 15.973 | 2.718 | 1393.847 | 1152518 | 410.475 | 35982 | 1761 | 6053.570 | 7857.892 |
| 60 | 2012 | 2.141 | 14.689 | 1.950 | 1534.108 | 174526 | 240.572 | 31558 | 933 | 9169.968 | 10944.648 |
| 61 | 2013* | 3.694 | 21.147 | 3.635 | 3214.987 | 662547 | 527.595 | 156855 | 2137 | 3911.699 | 11070.011 |
| 62 | 2014* | 10.242 | 9.248 | 5.498 | 1443.931 | 168735 | 459.216 | 15735 | 1402 | 4722.741 | 6626.294 |
| 63 | 2015* | 1.806 | 28.951 | 2.877 | 13816.760 | 939787 | 8046.944 | 29327 | 977 | 8672.332 | 33257.019 |

64 2016* 0.612 18.219 0.752 642.156 152339 69.004 18987 1077 852.160 1386.854
TOTAL 444.749 2005.640 238.285 86661.576 76140206 42716.650 5951462 104077 137532.186 274058.127
AVG 6.949 31.338 3.723 1354.087 1189691 667.448 92992 1626 2148.940 4282.158
MAX 17.500 70.450 12.299 13816.760 3507542 10809.795 618248 11316 17509.353 33257.019
(YEAR) 1978 1978 2005 2015 1978 2009 1979 1977 2009 2009
* Tentative